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PCT

RAW SEQUENCE LISTING

DATE: 03/02/2001

PATENT APPLICATION: US/09/763,019

TIME: 12:58:15

Input Set : A:\PPD50355 US SEQ LIST.txt

Output Set: N:\CRF3\03022001\I763019.raw

3 <110> APPLICANT: Evans, Ian
 4 Ray, John
 6 <120> TITLE OF INVENTION: Polynucleotide Sequences
 8 <130> FILE REFERENCE: PPD50355/UST
 C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/763,019
 C--> 11 <141> CURRENT FILING DATE: 2001-02-15
 13 <150> PRIOR APPLICATION NUMBER: GB 9818003.7
 14 <151> PRIOR FILING DATE: 1998-08-18
 16 <150> PRIOR APPLICATION NUMBER: PCT/GB99/02720
 17 <151> PRIOR FILING DATE: 1999-08-17
 19 <160> NUMBER OF SEQ ID NOS: 37
 21 <170> SOFTWARE: PatentIn Ver. 2.1
 23 <210> SEQ ID NO: 1
 24 <211> LENGTH: 399
 25 <212> TYPE: DNA
 26 <213> ORGANISM: Dahlia merckii
 28 <220> FEATURE:
 29 <221> NAME/KEY: CDS
 30 <222> LOCATION: (53)..(388)
 32 <400> SEQUENCE: 1
 33 gtgccccggg tcacgaagtt cggcacatct tagcggtatg cataagtcaa aa atg gcc 58
 34 Met Ala
 35 1
 37 aaa aat tca gtt gct ttc ttt gca ttg tgc ctg ctt ctt ttc att ctt 106
 38 Lys Asn Ser Val Ala Phe Phe Ala Leu Cys Leu Leu Phe Ile Leu
 39 5 10 15
 41 gct atc tca gaa atc aga tcg gtg aag ggg gaa tta tgt gag aag gca 154
 42 Ala Ile Ser Glu Ile Arg Ser Val Lys Gly Glu Leu Cys Glu Lys Ala
 43 20 25 30
 45 agc aag aca tgg tct gga aat tgt ggc aat aca aga cac tgt gat gac 202
 46 Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Arg His Cys Asp Asp
 47 35 40 45 50
 49 cag tgc aag tct tgg gag ggt gca gcc cat gga gct tgt cac gtg cgc 250
 50 Gln Cys Lys Ser Trp Glu Gly Ala Ala His Gly Ala Cys His Val Arg
 51 55 60 65
 53 ggt ggg aaa cac atg tgc ttc tgc tac ttc aac tgt ccc aaa gcc cag 298
 54 Gly Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys Pro Lys Ala Gln
 55 70 75 80
 57 aag ttg gct gag gat aaa ctc aga gca gca gag cta gca aag gag aag 346
 58 Lys Leu Ala Glu Asp Lys Leu Arg Ala Ala Glu Leu Ala Lys Glu Lys
 59 85 90 95
 61 aat aat att gga gct gaa aag gtg cct tca gcc aca cct tga 388
 62 Asn Asn Ile Gly Ala Glu Lys Val Pro Ser Ala Thr Pro
 63 100 105 110
 65 gtactaacaa a 399
 70 <210> SEQ ID NO: 2
 71 <211> LENGTH: 523

P.S.
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72 <212> TYPE: DNA
73 <213> ORGANISM: Dahlia merckii
75 <220> FEATURE:
76 <221> NAME/KEY: CDS
77 <222> LOCATION: (11)..(337)
79 <400> SEQUENCE: 2
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81           Met Ala Lys Asn Ser Val Ala Phe Leu Ala Phe Leu Leu
82           1           5           10
84 ctt ctt ttc gtt ctt gct atc tca gaa atc gga tgc gtg aag ggg gaa      97
85 Leu Leu Phe Val Leu Ala Ile Ser Glu Ile Gly Ser Val Lys Gly Glu
86       15           20           25
88 tta tgt gag aag gca agc aag aca tgg tct gga aat tgt ggc aat aca      145
89 Leu Cys Glu Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr
90   30           35           40           45
92 aga cac tgt gat gac cag tgc aag tct tgg gag ggc gca gcc cat gga      193
93 Arg His Cys Asp Asp Gln Cys Lys Ser Trp Glu Gly Ala Ala His Gly
94       50           55           60
96 gct tgt cac gtg cgc ggt ggg aaa cac atg tgc ttt tgc tac ttc aac      241
97 Ala Cys His Val Arg Gly Gly Lys His Met Cys Phe Cys Tyr Phe Asn
98       65           70           75
100 tgt tcc aaa gcc cag aag ctg gct cag gat aaa ctc aaa gcc gac aag      289
101 Cys Ser Lys Ala Gln Lys Leu Ala Gln Asp Lys Leu Lys Ala Asp Lys
102       80           85           90
104 ctc gcc aag gag aag agt gaa gcc gaa aag gtg cca gct aca cct tga      337
105 Leu Ala Lys Glu Lys Ser Glu Ala Glu Lys Val Pro Ala Thr Pro
106       95           100          105
108 gtactaacaa gtgttgatg attatgaata aagagaaaat gctttctagt taccatattt 397
110 agcattctct aatgtgtaat gttgttgct tttggaacta attgcttaac tatgattcca 457
112 gctaataatg ttttaagtat ataataaag ttatcttatt ttgaagcctg taaaaaaaaa 517
114 aaaaaa                                           523
119 <210> SEQ ID NO: 3
120 <211> LENGTH: 385
121 <212> TYPE: DNA
122 <213> ORGANISM: Dahlia merckii
124 <220> FEATURE:
125 <221> NAME/KEY: CDS
126 <222> LOCATION: (24)..(320)
128 <400> SEQUENCE: 3
129 cggcacgagg cacaatctca aaa atg gcc aaa aat tgc gtt gct ttc ttt gca 53
130           Met Ala Lys Asn Ser Val Ala Phe Phe Ala
131           1           5           10
133 ttt gtc ctg ctt ctt ttc gtt ctt gct atc tca gaa att gga tgc gtg      101
134 Phe Val Leu Leu Leu Phe Val Leu Ala Ile Ser Glu Ile Gly Ser Val
135       15           20           25
137 aag gga gaa tta tgt gag aag gca agc aag aca tgg tct gga aat tgt      149
138 Lys Gly Glu Leu Cys Glu Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys
139       30           35           40
141 ggc atc aca tca cac tgt gac aac cag tgc cgg tgc tgg gag ggt gca      197

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142 Gly Ile Thr Ser His Cys Asp Asn Gln Cys Arg Ser Trp Glu Gly Ala
143          45          50          55
145 atc cat gga gct tgt cac gtg cgc ggt ggg aaa cac atg tgc ttc tgc 245
146 Ile His Gly Ala Cys His Val Arg Gly Gly Lys His Met Cys Phe Cys
147      60          65          70
149 tac ttc aac tgt tcc aaa gcc gat gag ctc gcg aag gag aag att gaa 293
150 Tyr Phe Asn Cys Ser Lys Ala Asp Glu Leu Ala Lys Glu Lys Ile Glu
151 75          80          85          90
153 gcc gaa aag atg cca gcc aca cct tga gtactaaca atgctatatg 340
154 Ala Glu Lys Met Pro Ala Thr Pro
155          95
157 attataaata aagagaaaat gcttttctaaa aaaaaaaaaa aaaaa 385
161 <210> SEQ ID NO: 4
162 <211> LENGTH: 577
163 <212> TYPE: DNA
164 <213> ORGANISM: Dahlia merckii
166 <220> FEATURE:
167 <221> NAME/KEY: CDS
168 <222> LOCATION: (20)..(346)
170 <400> SEQUENCE: 4
171 ggcacgagcc tattaaaaa atg gtg aat cga tcg gtt gct ttc tcc gtg ttc 52
172          Met Val Asn Arg Ser Val Ala Phe Ser Val Phe
173          1          5          10
175 gtt ctg atc ctt ttc gtg ctc gcc atc tca gat atc aca agt gtg aga 100
176 Val Leu Ile Leu Phe Val Leu Ala Ile Ser Asp Ile Thr Ser Val Arg
177      15          20          25
179 gga gaa gta tgc gag aaa gct agc aag aca tgg tca gga aac tgt gcc 148
180 Gly Glu Val Cys Glu Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly
181      30          35          40
183 aac acg gga cac tgt gac aac caa tgt aaa tac tgg gag ggg gcg gcc 196
184 Asn Thr Gly His Cys Asp Asn Gln Cys Lys Tyr Trp Glu Gly Ala Ala
185      45          50          55
187 cat ggg gcg tgc cac gtg cgt gga ggg aaa cac atg tgt ttc tgc tac 244
188 His Gly Ala Cys His Val Arg Gly Gly Lys His Met Cys Phe Cys Tyr
189      60          65          70          75
191 ttc aag tgt ccc aaa gcc gaa aag ctt gct caa gac aaa gtt aat gcc 292
192 Phe Lys Cys Pro Lys Ala Glu Lys Leu Ala Gln Asp Lys Val Asn Ala
193      80          85          90
195 caa gag ctt gac cgt gat gcc aag aaa gtg att ccg aac gtt gaa cat 340
196 Gln Glu Leu Asp Arg Asp Ala Lys Lys Val Ile Pro Asn Val Glu His
197      95          100          105
199 ccg tga aagggtcgtt ttctttaaat agaaagtctt agattacgaa tgcgaataac 396
200 Pro
202 tatagaaaat gtttgctaaa tgcacatta taattagaac tttatgattg ttgtcaatag 456
204 ggcattttct tgtagtgat atgtgtaata aggtgatgct tttatgcttt tcgtgcgtaa 516
206 gagttttcga ctatgtgtaa taaagaaagg gtcttttttt tttaaaaaaa aaaaaaaaaa 576
208 a 577
213 <210> SEQ ID NO: 5
214 <211> LENGTH: 446

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215 <212> TYPE: DNA
216 <213> ORGANISM: Dahlia merckii
218 <400> SEQUENCE: 5
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220 tcagggttatc aaatcttttag ttcattttatt gaatatgata gtattttatat tctttttatgg 120
221 ttttatgtgt tctgacaagt tgcaaatatt gagtagatat cgcattccgtt agtggagaac 180
222 tatgcgagaa agctagcaag acatgggtcgg gaaactgttg caatacggga cattgtgaca 240
223 accaatgtaa atcatgggag ggtgcggccc atggagcgtg tcatgtgcgt aacgggaaac 300
224 acatgtgttt ctgttacttc aattgtaaaa aagccgaaaa gcttgcctca gacaaactta 360
225 aagccgaaca actcgcctcaa gacaaactta atgcccacaa gcttgaccgt gatgccaaga 420
226 aagtggttcc aaacgttgaa catccg                                     446
229 <210> SEQ ID NO: 6
230 <211> LENGTH: 150
231 <212> TYPE: DNA
232 <213> ORGANISM: Dahlia merckii
234 <400> SEQUENCE: 6
235 gagcttttgcg agaaggcttc taagacttgg tctggaaaact gcggaacac tggacattgc 60
236 gataaccaat gcaagtcttg ggaggagct gctcatggag cttgccatgt tagaaacgga 120
237 aagcatatgt gcttctgcta cttcaactgc                                     150
240 <210> SEQ ID NO: 7
241 <211> LENGTH: 60
242 <212> TYPE: DNA
243 <213> ORGANISM: Dahlia merckii
245 <400> SEQUENCE: 7
246 gaggttttgcg agaaggcttc taagacttgg tctggaaaact gcggaacac tggacattgc 60
248 <210> SEQ ID NO: 8
249 <211> LENGTH: 111
250 <212> TYPE: PRT
251 <213> ORGANISM: Dahlia merckii
253 <400> SEQUENCE: 8
254 Met Ala Lys Asn Ser Val Ala Phe Phe Ala Leu Cys Leu Leu Leu Phe
255   1           5           10           15
257 Ile Leu Ala Ile Ser Glu Ile Arg Ser Val Lys Gly Glu Leu Cys Glu
258           20           25           30
260 Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Arg His Cys
261           35           40           45
263 Asp Asp Gln Cys Lys Ser Trp Glu Gly Ala Ala His Gly Ala Cys His
264           50           55           60
266 Val Arg Gly Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys Pro Lys
267           65           70           75           80
269 Ala Gln Lys Leu Ala Glu Asp Lys Leu Arg Ala Ala Glu Leu Ala Lys
270           85           90           95
272 Glu Lys Asn Asn Ile Gly Ala Glu Lys Val Pro Ser Ala Thr Pro
273           100          105          110
276 <210> SEQ ID NO: 9
277 <211> LENGTH: 108
278 <212> TYPE: PRT
279 <213> ORGANISM: Dahlia merckii
281 <400> SEQUENCE: 9

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282 Met Ala Lys Asn Ser Val Ala Phe Leu Ala Phe Leu Leu Leu Phe
283   1           5           10           15
285 Val Leu Ala Ile Ser Glu Ile Gly Ser Val Lys Gly Glu Leu Cys Glu
286           20           25           30
288 Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Arg His Cys
289           35           40           45
291 Asp Asp Gln Cys Lys Ser Trp Glu Gly Ala Ala His Gly Ala Cys His
292           50           55           60
294 Val Arg Gly Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys Ser Lys
295   65           70           75           80
297 Ala Gln Lys Leu Ala Gln Asp Lys Leu Lys Ala Asp Lys Leu Ala Lys
298           85           90           95
300 Glu Lys Ser Glu Ala Glu Lys Val Pro Ala Thr Pro
301           100          105
304 <210> SEQ ID NO: 10
305 <211> LENGTH: 98
306 <212> TYPE: PRT
307 <213> ORGANISM: Dahlia merckii
309 <400> SEQUENCE: 10
310 Met Ala Lys Asn Ser Val Ala Phe Phe Ala Phe Val Leu Leu Leu Phe
311   1           5           10           15
313 Val Leu Ala Ile Ser Glu Ile Gly Ser Val Lys Gly Glu Leu Cys Glu
314           20           25           30
316 Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Ile Thr Ser His Cys
317           35           40           45
319 Asp Asn Gln Cys Arg Ser Trp Glu Gly Ala Ile His Gly Ala Cys His
320           50           55           60
322 Val Arg Gly Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys Ser Lys
323   65           70           75           80
325 Ala Asp Glu Leu Ala Lys Glu Lys Ile Glu Ala Glu Lys Met Pro Ala
326           85           90           95
328 Thr Pro
331 <210> SEQ ID NO: 11
332 <211> LENGTH: 108
333 <212> TYPE: PRT
334 <213> ORGANISM: Dahlia merckii
336 <400> SEQUENCE: 11
337 Met Val Asn Arg Ser Val Ala Phe Ser Val Phe Val Leu Ile Leu Phe
338   1           5           10           15
340 Val Leu Ala Ile Ser Asp Ile Thr Ser Val Arg Gly Glu Val Cys Glu
341           20           25           30
343 Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Gly His Cys
344           35           40           45
346 Asp Asn Gln Cys Lys Tyr Trp Glu Gly Ala Ala His Gly Ala Cys His
347           50           55           60
349 Val Arg Gly Gly Lys His Met Cys Phe Cys Tyr Phe Lys Cys Pro Lys
350   65           70           75           80
352 Ala Glu Lys Leu Ala Gln Asp Lys Val Asn Ala Gln Glu Leu Asp Arg
353           85           90           95

```

FYI

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY

DATE: 03/02/2001

PATENT APPLICATION: US/09/763,019

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Input Set : A:\PPD50355 US SEQ LIST.txt

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L:10 M:270 C: Current Application Number differs, Replaced Application Number

L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:461 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17

L:523 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20

L:551 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21

L:579 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22